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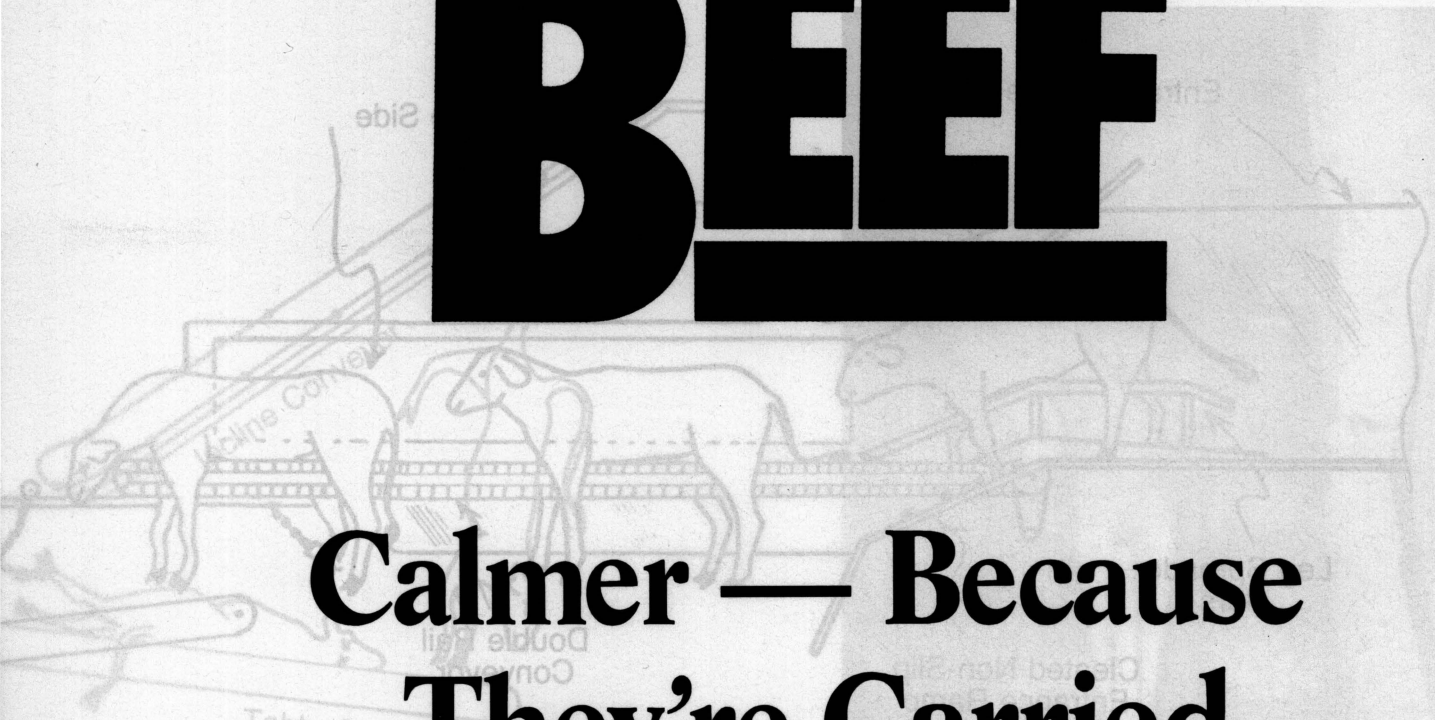
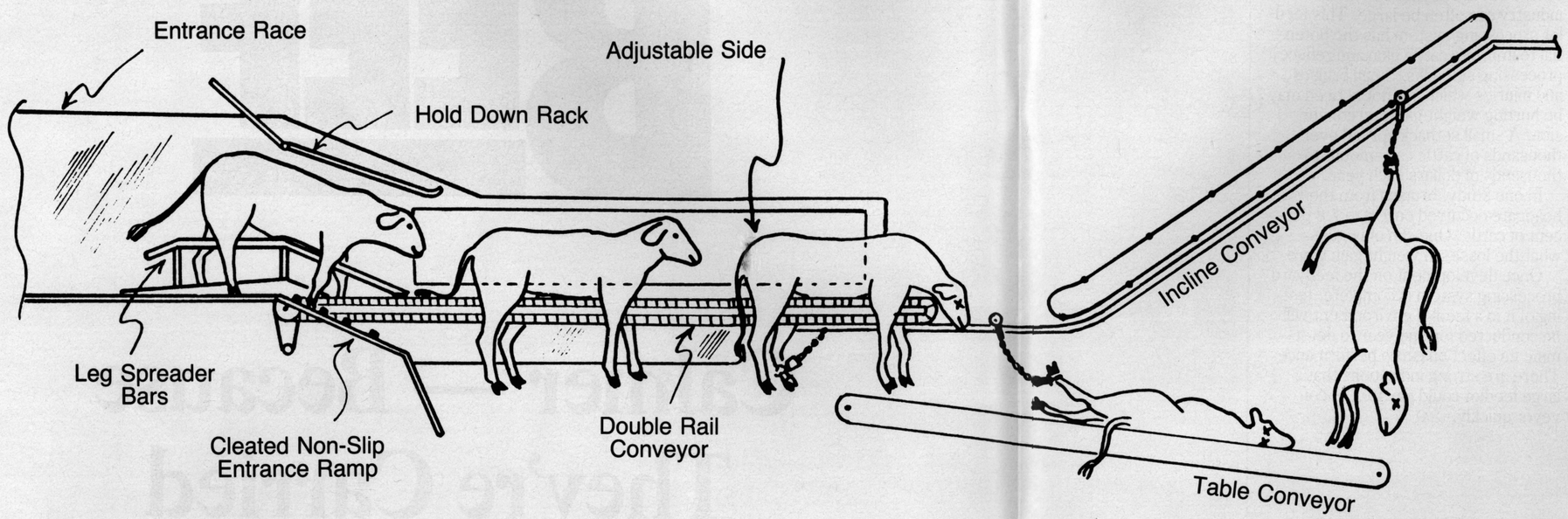
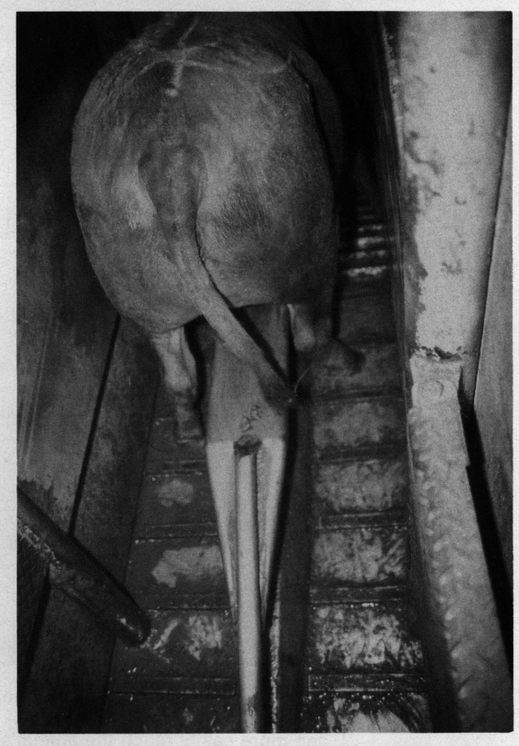


Calmer — Because They're Carried

By Temple Grandin





Calmer — Because They're Carried

This new "V-conveyor restrainer system" keeps cattle calmer at point of slaughter.

By Temple Grandin

Quieter cattle and a more humane and efficient method of handling them at the point of slaughter are the pluses to an innovative conveyor restrainer system that has been installed at the Excel plant in Schuyler, NE.

Providing many advantages over the V-conveyor restrainer it replaced, this new, center-track system allows cattle to ride on a conveyor supported by their briskets and bellies. Since the animal is fully supported most cattle settle down and ride very calmly.

► The cattle enter the system by walking down a non-slip ramp on each side of the conveyor until they find themselves riding along. To position the legs on each side of the conveyor, the cattle walk over a leg spreader bar in the entrance chute.

The animals walk in easily because they can enter with their legs in a normal position. In the old V restrainer, the cattle had to cram their legs together as they entered. This resulted in constant balking.

► Movable side panels controlled by hydraulics enable instant adjustment for all sizes of cattle. The system can handle calves weighing 500 pounds and large steers up to 1,800 pounds. As the animals ride along they are stunned with a captive bolt stunner and the shackle is attached to their leg. The center track restrainer is compatible with other plant equipment, making installation easy.

► Both efficiency and humaneness have been improved. Stunning is more accurate because the operator can stand closer to the animal. Expensive processing line stoppages caused by mis-stunned cattle have been reduced. A recent ergonomics study indicated that strain on the employee's back is reduced. In the old system, the stunner operator had to reach 11 inches farther.

The center track restrainer was designed by Grandin Livestock Handling Systems Inc., Urbana, IL, and constructed by Swilley Equipment Co. in Logan, IA. The project was made possible with funding from the Humane Family Foundation, formerly known as Humane Information Services of St. Petersburg, FL.

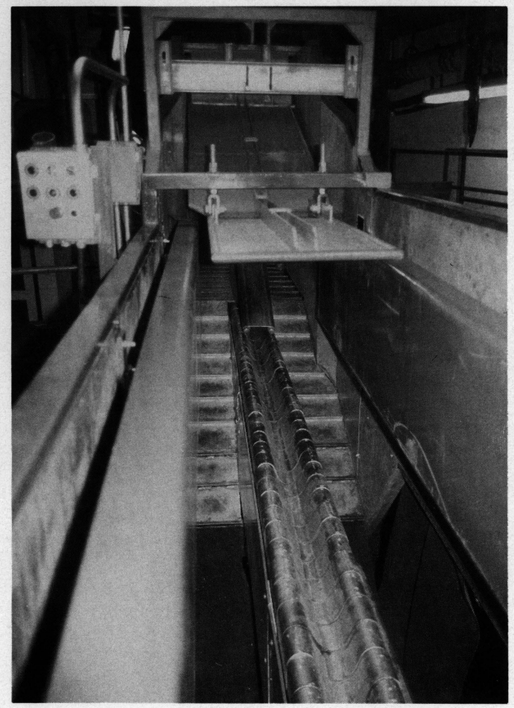
The system at Excel is patterned after a double-rail calf restrainer system which has been installed in two veal calf packing plants. These systems were designed by the author and the University of Connecticut (UC) with grants from the Council for Livestock Protection in New York.

The original laboratory prototype was built at UC in the early '70s. Tests on a wooden prototype indicated that sheep and calves would ride quietly and stress levels were low. Commercial development of the system did not take place until 1986.

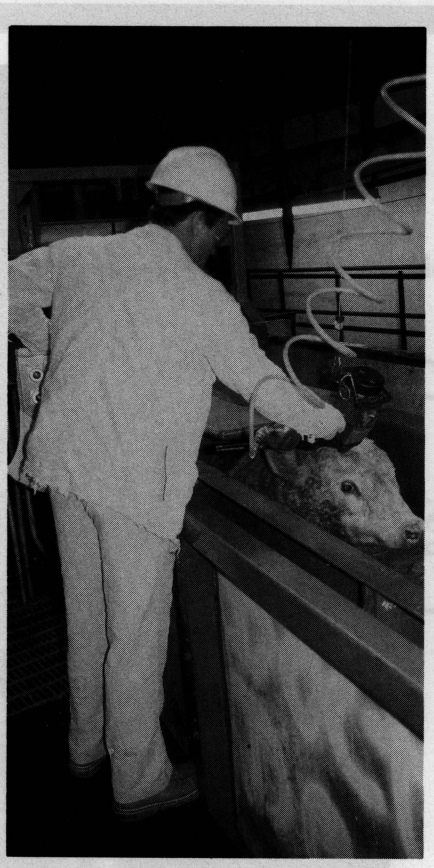
It took years to find a veal plant which was willing to gamble with something totally new.

Vaughn Blum and Mike Chabot at the Excel plant in Schuyler have created a wonderful center for innovation in an industry often slow to innovate. Where their competitors were unwilling to gamble on the new design, Blum and Chabot could appreciate the advantages of the new restrainer system and dared to get involved in its initial development. Now that the system has been successfully operating for several months, many other packing companies have expressed interest in the design.

Work is currently in progress on development of the center track concept for feedlot processing. Thus far it has progressed slowly because Gearn Industries in Hereford, TX, a feedyard equipment design and engineering firm, has had to fit develop-



Top photo depicts how cattle straddle the bar on the entrance ramp, which positions their legs on either side of the conveyor. Cattle readily walk down the non-slip surface. Photo at right shows the moving conveyor constructed of metal segments attached to a chain. Side panels adjust for different sizes of cattle.



Cattle are stunned as they ride the conveyor. Because the operator can more easily reach the animal's head, accuracy, and thus efficiency and humaneness, are improved.

ment in between mill jobs.

Research and development cost big bucks, but the payoffs for the entire industry can often be large. This feedlot processing system has the potential to improve cattle gain and reduce processing setbacks. Small bruises and injuries which are not noticed may be hurting weight gain and conversion. A small setback spread over thousands of cattle can amount to thousands of dollars each year.

In one study, bruises from the headgate occurred on 1.6 to 7.8 percent of cattle. One can only guess what the losses in weight gain were.

Once development on the feedyard processing system is complete, testing of it in a feedlot environment will be conducted for one year to determine its effect on cattle performance. There are strong indications that a large feedlot could pay for the conveyor quickly. ◇

Temple Grandin is a professional animal scientist and founder of Grandin Livestock Handling Systems Inc. She is a consultant and designer of livestock handling facilities for feedlots, ranches, packing plants and auctions.